

Vickie S. Wilson

Education

- B.S., Framingham State College, Framingham, MA; 1992.
- Ph.D., North Carolinas State University, 1999.

Professional Experience

- 2000-present: Research Biologist, EPA.

Research Interests

- Cellular and molecular mechanisms of toxicant-induced abnormal reproductive development using in vitro and in vivo models.
- Interaction of xenobiotics with the androgen receptor and effects on androgen regulated genes.
- Development of novel in vitro assays to assist with extrapolation across species.

Professional Activities

- Editorial Board: Biology of Reproduction.
- Member, International committee to develop a recombinant human estrogen receptor binding assay, an international effort including representatives from the U.S. EPA (Office of Science Coordination and Policy and Reproductive Toxicology Division), European Centre for the Validation of Alternative Methods, Organization for Economic Cooperation and Development, and Japan (Chemicals Evaluation and Research Institute). 2004-present.
- Advisor, providing technical support and advice to many labs on both the MDA-kb2 and T47D-Kbluc cell lines; point of contact on the culture and use of these transcriptional activation assays.
- Contract Officer Representative and scientific/technical consult with CEETox Inc., National Center for Computational Toxicology Proof of Concept Study. 2005-present.
- Chair, Organizing Committee for CAFO (Concentrated Animal Feedlot Operation Workshop Initial face to face planning meeting, Research Triangle Park, NC. 2006.
- Member, Workgroup on Office of Research and Development-wide committee to evaluate the use of Toxicogenomics data in Risk Assessment: Case Study for a Chemical in the Androgen-Mediated Male Reproductive Development Toxicity Pathway. 2005-present.
- Contributor, EPA Board of Scientific Counselors Review of the Endocrine Disruptor Chemicals Program.
- Member, Endocrine Disruptors Screening Program Group (Reproductive Toxicology Division), providing technical expertise and advice to the Office of

- Science Coordination and Policy as they direct the validation of the in vitro and in vivo assays for the EDSP. 2001-present.
- Member, Workgroup for EPA's Goal 3 Multi-year Plan for the Office of Research and Development. 2002.
 - Member, Synergy Workgroup, to foster cross-Divisional interaction and multi-disciplinary research within EPA. 2001-2004.
 - EPA Bronze Medal, for outstanding contributions to the Agency's Endocrine Disruptor Screening Program. 2004.

Invited Lectures/Symposia

- American Society of Andrology Annual Meeting, Symposium on Endocrine Issues in Male Reproductive Failure: Environmental anti-androgens: Altered development and function of the male reproductive tract. 2006.
- European Commission, Joint Research Center, European Centre for the Validation of Alternative Methods, Ispra, Italy: Overview of newly developed in vitro assays for endocrine disruptor screening. 2004.
- National Institute of Toxicological Research/Korea Food and Drug Administration Endocrine Disruptors International Symposium, Seoul, South Korea: Cellular and molecular actions of environmental androgen and antiandrogens. 2003.
- Endocrine Disruptor Methods Validation Subcommittee, National Advisory Council for Environmental Policy and EPA's Office of Science Coordination and Policy, Washington, DC: Update on androgen receptor binding assay. 2003.
- National Center for Environmental Assessment/National Health and Environmental Effects Research Laboratory Workshop on the Use of Mechanistic Data in Risk Assessment, EPA, Research Triangle Park, NC: Current research: Endocrine Disrupting Chemicals. 2003.
- National Center for Environmental Assessment Colloquium on Current Use and Future Needs of Genomics in Ecological and Human Health Risk Assessment, Alexandria, VA: The nuts and bolts of genomic research: Micro arrays and proteomics. 2003.
- Institute of Pharmacology and Toxicology, Section of Developmental and Environmental Toxicology, University of Zurich, Zurich, Switzerland: Effects of phthalates on male reproductive development. 2002.
- University of Lausanne, Institute of Pharmacology and Toxicology, Lausanne, Switzerland: Developmental effects of phthalates. 2002.
- Small Fish Meeting, Mid-Continent Ecology Division, National Health and Environmental Effects Research Laboratory, EPA, Duluth, MN: Sex steroid receptor sequence and function. 2002.
- Interagency Coordinating Committee on the Validation of Alternative Methods Endocrine Disruptor Expert Panel Public Meeting, NTP Interagency Center for the Evaluation of Alternative Toxicological Methods, National Toxicology Program, National Institute of Environmental Health Sciences, Research Triangle Park, NC: Overview of ER and AR in vitro binding and transcriptional activation assays. 2002

Selected Publications

Wilson VS, Cardon MC, Gray LE, Hartig PC. 2007. Competitive binding comparison of endocrine-disrupting compounds to recombinant androgen receptor from fathead minnow, rainbow trout, and human. Environ Toxicol Chem. 26:1793-802. [Abstract](#)

Blystone CR, Lambright CS, Furr J, Wilson VS, Gray LE. 2007. Iprodione delays male rat pubertal development, reduces serum testosterone levels, and decreases *ex vivo* testicular testosterone production. Toxicol Lett. 174:74-81. [Abstract](#)

Wilson VS, Howdeshell K, Lambright CS, Furr JR, Gray LE. 2007. Differential expression of the phthalate syndrome in male Sprague Dawley and Wistar rats after *in utero* DEHP exposure. Toxicol Lett. 170:177-84. [Abstract](#)

Howdeshell KL, Furr JR, Lambright CS, Wilson VS, Gray LE. 2007. Cumulative effects of dibutyl phthalate and diethylhexyl phthalate on male rat reproductive tract development: Altered fetal steroid hormones and genes. Toxicol Sci. 99:190-202. [Abstract](#)

Blystone CR, Lambright CS, Howdeshell KL, Furr J, Sternberg RM, Butterworth BC, Durhan EJ, Makynen EA, Ankley GT, Wilson VS, Leblanc GA, Gray LE.. 2007. Sensitivity of fetal rat testicular steroidogenesis to maternal prochloraz exposure and the underlying mechanism of inhibition. Toxicol Sci. 97:512-9. [Abstract](#)

Blystone C, Furr JR, Lambright CS, Ryan BC, Howdeshell K, Wilson VS, Leblanc GA, Gray LE. 2007. Prochloraz inhibits testosterone production at dosages below those that affect androgen-dependent organ weights or the onset of puberty in the male Sprague Dawley rat. Toxicol Sci. 97:65-74. [Abstract](#)

Owens CV, Lambright C, Cardon M, Gray LE, Gullett BK, Wilson VS. 2006. Detection of androgenic activity in emissions from diesel fuel and biomass combustion. Environ Toxicol Chem. 25:2123-31. [Abstract](#)

Durhan EJ, Lambright CS, Makynen EA, Lazorchak J, Hartig PC, Wilson VS, Gray LE, Ankley GT. 2006. Identification of metabolites of trenbolone acetate in androgenic runoff from a beef feedlot. Environ Health Perspect. 114 Suppl 1:65-8. [Abstract](#)

Gray LE, Wilson VS, Stoker TE, Lambright CS, Furr JR, Noriega NC, Howdeshell K, Ankley GT, Guillette L. 2006. Adverse effects of environmental antiandrogens and androgens on reproductive development in mammals. Int J Androl. 29:96-104; 105-8. [Abstract](#)

Stoker TE, Cooper RL, Lambright CS, Wilson VS, Furr JR, Gray LE. 2005. *In vivo* and *in vitro* anti-androgenic effects of DE-71, a commercial polybrominated diphenyl ether (PBDE) mixture. Toxicol Appl Pharmacol. 207:78-88. [Abstract](#)

Ankley GT, Jensen KM, Durhan EJ, Makynen EA, Butterworth BC, Kahl MD, Villeneuve DL, Linnum A, Gray LE, Cardon M, Wilson VS. 2005. Effects of two fungicides with multiple modes of action on reproductive endocrine function in the fathead minnow (*pimephales promelas*). *Toxicol Sci.* 86:300-8. [Abstract](#)

Rosen MB, Wilson VS, Schmid JE, Gray LE. 2005. Gene expression analysis in the ventral prostate of rats exposed to vinclozolin or procymidone. *Reprod Toxicol.* 19:367-79. [Abstract](#)

Noriega NC, Ostby JS, Lambright CS, Wilson VS, Gray LE. 2005. Late gestational exposure to the fungicide prochloraz delays the onset of parturition and causes reproductive malformations in male rat offspring. *Biol Reprod.* 72:1324-35. [Abstract](#)

Wilson VS, Cardon MC, Thornton J, Korte JJ, Welch JE, Gray LE, Hartig PC. 2004. Cloning, expression and characterization of the androgen receptor and isolation of estrogen receptor alpha from the fathead minnow (*pimephales promelas*). *Environ Sci Technol.* 38:6314-21. [Abstract](#)

Gray LE, Wilson VS, Noriega NC, Lambright CS, Furr JR, Stoker TE, Laws SC, Goldman JM, Cooper RL, Foster P. 2004. Use of the laboratory rat as a model in endocrine disruptor screening and testing. *42:425-37.* [Abstract](#)

Ankley GT, Defoe DL, Kahl MD, Jensen KM, Makynen EA, Miracle A, Hartig P, Gray LE, Cardon M, Wilson V. 2004. Evaluation of the model anti-androgen flutamide for assessing the mechanistic basis of responses to an androgen in the fathead minnow (*pimephales promelas*). *Environ Sci Technol.* 38:6322-7. [Abstract](#)

Gray LE, Ostby JS, Furr J, Wolf CJ, Lambright C, Wilson VS, Noriega N. 2004. Toxicant induced hypospadias in the male rat. In: *Advances in Experimental Medicine and Biology*. Ed.: L.S. Baskin. Springer: New York, NY.

Wilson VS, Bobseine K, Gray LE. 2004. Development and characterization of a cell line that stably expresses an estrogen-responsive luciferase reporter for the detection of estrogen receptor agonist and antagonists. *Toxicol Sci.* 81:69-77. [Abstract](#)

Wilson VS, Lambright C, Furr J, Ostby J, Wood C, Held G, Gray LE. 2004. Phthalate ester-induced gubernacular lesions are associated with reduced INSL3 gene expression in the fetal rat testis. *Toxicol Lett.* 146:207-15. [Abstract](#)

Ankley GT, Jensen KM, Makynen EA, Kahl MD, Korte JJ, Hornung MW, Henry TR, Denny JS, Leino RL, Wilson VS, Cardon MC, Hartig PC, Gray LE. 2003. Effects of the androgenic growth promoter 17-beta-trenbolone on fecundity and reproductive endocrinology of the fathead minnow. *Environ Toxicol Chem.* 22:1350-60. [Abstract](#)

Gooding MP, Wilson VS, Folmar LC, Marcovich DT, LeBlanc GA. 2003. The biocide tributyltin reduces the accumulation of testosterone as fatty acid esters in the mud snail (*ilyanassa obsoleta*). *Environ Health Perspect.* 111:426-30. [Abstract](#)

Wilson VS, Lambright C, Ostby J, Gray LE. 2002. *In vitro* and *in vivo* effects of 17beta-trenbolone: A feedlot effluent contaminant. *Toxicol Sci.* 70:202-11. [Abstract](#)

Rockett JC, Kavlock RJ, Lambright CS, Parks LG, Schmid JE, Wilson VS, Wood C, Dix DJ. 2002. DNA arrays to monitor gene expression in rat blood and uterus following 17-beta-estradiol exposure: Biomonitoring environmental effects using surrogate tissues. *Toxicol Sci.* 69:49-59. [Abstract](#)

Gray LE, Ostby J, Wilson V, Lambright C, Bobseine K, Hartig P, Hotchkiss A, Wolf C, Furr J, Price M, Parks L, Cooper RL, Stoker TE, Laws SC, Degitz SJ, Jensen KM, Kahl MD, Korte JJ, Makynen EA, Tietge JE, Ankley GT. 2002 Xenoendocrine disrupters-tiered screening and testing: Filling key data gaps. *Toxicology.* 181-182:371-82. [Abstract](#)

Durhan EJ, Lambright C, Wilson V, Butterworth BC, Kuehl OW, Orlando EF, Guillette LJ, Gray LE, Ankley GT. 2002. Evaluation of androstenedione as an androgenic component of river water downstream of a pulp and paper mill effluent. *Environ Toxicol Chem.* 21:1973-6. [Abstract](#)

Hartig PC, Bobseine KL, Britt BH, Cardon MC, Lambright CS, Wilson VS, Gray LE. 2002. Development of two androgen receptor assays using adenoviral transduction of MMTV-LUC reporter and/or HAR for endocrine screening. *Toxicol Sci.* 66:82-90. [Abstract](#)

Wilson VS, Bobseine K, Lambright CS, Gray LE. 2002. A novel cell line, MDA-KB2, that stably expresses an androgen- and glucocorticoid-responsive reporter for the detection of hormone receptor agonists and antagonists. *Toxicol Sci.* 66:69-81. [Abstract](#)